

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A contents distributing apparatus, comprising
a data output device that outputs for outputting encoded data; and
a plurality of transmitters that transmits transmitting device for transmitting the encoded
data outputted from the data output device; and
a computer that controls at least one of the data output device and the plurality of
transmitters, wherein:

the data output device outputs data encoded by hierarchical encoding as the encoded data;
and

each of the plurality of transmitters transmitting device transmits at least a part of data of
at least one layer among the data encoded by the hierarchical encoding.

2. (currently amended): The contents distributing apparatus as claimed in claim 1,
wherein:

the data output device outputs the data encoded by the hierarchical encoding by
separating it to respective encoded data of each layer; and
each of the plurality of transmitters transmitting device transmits each of the
encoded data individually by each layer.

3. (currently amended): The contents distributing apparatus as claimed in claim 1, wherein each of the plurality of transmitters transmitting device transmits at least a part of referred-information encoded data of at least one layer among the data encoded by the hierarchical encoding.

4. (currently amended): The contents distributing apparatus as claimed in claim 1, wherein each of the plurality of transmitters transmitting device transmits, among the data encoded by the hierarchical encoding: a) at least a part of encoded data of one layer; and b) at least a part of referred-information encoded data of at least one layer among remaining layers.

5. (currently amended): The contents distributing apparatus as claimed in claim 1, wherein each of the plurality of transmitters transmitting device transmits, among the data encoded by the hierarchical encoding: a) at least a part of referred-information encoded data of one layer; and b) at least a part of encoded data of at least one layer among remaining layers.

6. (currently amended): The contents distributing apparatus as claimed in any one of claims 1 – 5, wherein

each of the plurality of transmittertransmitting device comprises a transmission managing unit, wherein

the transmission managing unit controls quality and stability and/or confidentiality of distribution contents on the contents distributing apparatus side through controlling at least one of: number of the encoded data to be transmitted; hierarchy of the encoded data; distribution target of a cipher key; encryption method; and degree of encryption.

7. (original): The contents distributing apparatus as claimed in claim 6, wherein, when performing data transmission of a plurality of pieces of encoded data with a time difference provided therebetween, the transmission managing unit changes a compression rate of following encoded data with respect to a compression rate of preceding encoded data with the time difference.

8. (original): The contents distributing apparatus as claimed in claim 7, wherein the transmission managing unit selects the compression rate in accordance with a distribution rate and/or condition of a transmission line.

9. (currently amended): The contents distributing apparatus as claimed in ~~claim-6~~8, wherein the transmission managing unit selects whether or not to transmit at least a part of the encoded data in accordance with the distribution rate and/or the condition of the transmission line.

10. (currently amended): The contents distributing apparatus as claimed in ~~any one of claims 1—5~~claim 1, wherein the transmitting device performs data transmission including encoded data of layers higher than hierarchy of the data to be transmitted.

11. (currently amended): The contents distributing apparatus as claimed in ~~claim-6~~1, wherein the transmission managing unit controls the quality and stability of the distribution

contents on a contents distributing side through controlling informing target of session information of a session by which the encoded data is transmitted.

12. (currently amended): A contents receiving apparatus, comprising:

a plurality of receivers that receives ~~device for receiving~~ encoded data transmitted by a plurality of ~~transmitters~~ sessions;

a device that receives ~~for receiving~~ the encoded data received by each of the plurality of receivers ~~receiving device, and discriminates~~ discriminating and separates ~~separating~~ individual encoded data units therefrom; and

a reconstruction device which extracts encoded data received without a transmission error and a fault from the discriminated and separated encoded data, and reconstructs and outputs encoded data from the extracted encoded data; and

a computer that controls at least one of the plurality of receivers, the device and the ~~reconstruction device~~.

13. (original): The contents receiving apparatus as claimed in claim 12, wherein, when reconstructing the encoded data, the reconstruction device judges duplication of the encoded data from identifiers given to encoded data transmission units.

14. (previously presented): The contents receiving apparatus as claimed in claim 12, wherein the reconstruction device judges a compression rate and/or hierarchy of the encoded data from at least one of:

a) an encoded data receiving session determined in advance;

b) encoded data identifying information determined in advance, which is given to the encoded data transmission unit;

c) an encoded data receiving session informed by call connection processing; and

d) the encoded data identifying information which is given to the encoded data transmission unit and informed by the call connection processing.

15. (currently amended): The contents receiving apparatus as claimed in any one of claims 12 – 14, comprising a report transmitting unit that transmits for transmitting a receiving state report to inform condition of a transmission line.

16. (currently amended): A contents transmitting/receiving system, comprising a contents distributing apparatus, a contents receiving apparatus, and a communication network that connects for connecting the contents distributing apparatus and the contents receiving apparatus, wherein:

the contents distributing apparatus comprises
a data output device that outputs for outputting encoded data; and
a plurality of transmitters that transmit ~~transmitting device for transmitting~~ at least a part of data of at least one layer among the data encoded by the hierarchical encoding outputted from the data output device; and

a first computer that controls at least one of the data output device and the plurality of transmitters; and

the contents receiving apparatus comprises

a plurality of receivers that receive ~~device for receiving~~ encoded data transmitted by the a plurality of transmittersessions;

a device that receives for receiving the encoded data received by each of the plurality of receivers receiving device, and discriminates~~discriminating~~ and separates~~separating~~ individual encoded data units therefrom; and

a reconstruction device which extracts encoded data received without a transmission error and a fault from the discriminated and separated encoded data, and reconstructs and outputs encoded data from the extracted encoded data; and

a second computer that controls at least one of the plurality of receivers, the device and the reconstruction device.

17. (currently amended): A contents distributing method, comprising the steps of:
an output step of outputting encoded data; and
a transmission step of transmitting the encoded data outputted in the output step by a plurality of transmitters, wherein

data encoded by hierarchical encoding is outputted as the encoded data in the output step, wherein the encoding is performed by a computer, and

at least a part of data of at least one layer among the data encoded by the hierarchical encoding is transmitted by each of the plurality of transmitters in the transmission step.

18. (currently amended): The contents distributing method as claimed in claim 17, wherein

in the output step, the data encoded by the hierarchical encoding is separated to respective encoded data of each layer to be outputted; and

in the transmission step, each of the encoded data is transmitted by each layer by each of the plurality of transmitters.

19. (currently amended): The contents distributing method as claimed in claim 17, wherein, in the transmission step, there is transmitted, by each of the plurality of transmitters, at least a part of referred-information encoded data of at least one layer among the data encoded by the hierarchical encoding.

20. (currently amended): The contents distributing method as claimed in claim 17, wherein, in the transmission step, among the data encoded by the hierarchical encoding, there is transmitted by each of the plurality of transmitters: a) at least a part of encoded data of a first layer; and b) at least a part of referred-information encoded data of at least one layer among remaining layers.

21. (currently amended): The contents distributing method as claimed in claim 17, wherein, in the transmission step, among the data encoded by the hierarchical encoding, there is transmitted by each of the plurality of transmitters: a) at least a part of referred-information encoded data of a first layer; and b) at least a part of encoded data of at least one layer among remaining layers.

22. (original): The contents distributing method as claimed in any one of claims 17 – 21, wherein quality and stability and/or confidentiality of distribution contents is controlled on the contents distributing apparatus side through controlling, on the contents distributing side, number of the encoded data to be transmitted, hierarchy of the encoded data, distribution target of a cipher key and/or encryption method and/or degree of encryption.

23. (original): The contents distributing method as claimed in claim 22, wherein, when performing data transmission of a plurality of pieces of encoded data with a time difference provided therebetween, a compression rate of following encoded data is changed with respect to a compression rate of preceding encoded data with the time difference.

24. (original): The contents distributing method as claimed in claim 23, wherein the compression rate is selected in accordance with a distribution rate and/or condition of a transmission line.

25. (previously presented): The contents distributing method as claimed in any one of claims 17 - 21, data transmission is performed including encoded data of layers higher than hierarchy of the data to be transmitted.

26. (previously presented): The contents distributing method as claimed in any one of claims 17 - 21, wherein the quality and stability of the distribution contents is controlled on a

contents distributing side through controlling informing target of session information of a session by which the encoded data is transmitted.

27. (original): The contents distributing method as claimed in claim 17, wherein the output step comprises at least one of the steps of:

- (a) an input step of first to N-th encoded data;
- (b) an input step of encoded data, and a generating step of the first to N-th encoded data from data of at least one layer among the encoded data inputted in the input step;
- (c) an input step of a first encoded data, and a generating step of second to N-th encoded data from data of at least one layer of the first encoded data inputted in the input step;
- (d) an encoding step of encoding an inputted signal into the first to N-th encoded data; and
- (e) an encoding step of encoding the inputted signal into the first encoded data, and a generating step of the second to N-th encoded data from data of at least one layer of the first encoded data inputted in the input step.

28. (original): The contents distributing method as claimed in claim 27, wherein, (N+1)-th encoded data is outputted in addition to the N-th encoded data.

29. (original): The contents distributing method as claimed in claim 28, wherein identifiers for identifying data are given to the first to (N+1)-th encoded data.

30. (original): The contents distributing method as claimed in claim 28 or 29, wherein each of the first to $(N+1)$ -th encoded data is transmitted by a different session.

31. (original): The contents distributing method as claimed in claim 28 or 29, wherein the first to $(N+1)$ -th encoded data are multiplexed to be transmitted.

32. (original): The contents distributing method as claimed in claim 28 or 29, wherein, among the first to $(N+1)$ -th encoded data, at least two pieces of encoded data are multiplexed, and the multiplexed data and remaining encoded data without multiplexing are transmitted, respectively, by different sessions.

33. (previously presented): The contents distributing method as claimed in any one of claims 27, 28 or 29, wherein a contents distributing side controls an informing target of session information of a session by which the encoded data is transmitted.

34. (previously presented): The contents distributing method as claimed in any one of claims 28 or 29, wherein the first to $(N+1)$ -th encoded data are distributed with a time difference provided therebetween.

35. (original): The contents distributing method as claimed in claim 34, wherein the time difference is set in accordance with condition of a transmission line and/or an encoding compression rate and/or a distribution rate and/or a rule determined in advance.

36. (currently amended): A contents receiving method, comprising the steps of:

 a receiving step of receiving encoded data transmitted by a plurality of transmitterssessions;

 a step of receiving the encoded data received in the receiving step, and discriminating and separating individual encoded data units therefrom; and

 a reconstruction step of extracting encoded data received without a transmission error and a fault from the discriminated and separated encoded data, and reconstructing and outputting encoded data from the extracted encoded data.

37. (original): The contents receiving method as claimed in claim 36, wherein, when reconstructing the encoded data, duplication of the encoded data is judged from identifiers given to encoded data transmission units.

38. (previously presented): The contents receiving method as claimed in claim 36, wherein a compression rate and/or hierarchy of the encoded data is judged from at least one of:

- a) an encoded data receiving session determined in advance;
- b) encoded data identifying information determined in advance, which is given to the encoded data transmission unit;
- c) an encoded data receiving session informed by call connection processing; and
- d) the encoded data identifying information which is given to the encoded data transmission unit and informed by the call connection processing.

39. (original): The contents receiving method as claimed in any one of claims 36 – 38, wherein a receiving state report is transmitted for informing condition of a transmission line.

40. (previously presented): The contents receiving method as claimed in any one of claims 36 – 38, wherein, in the receiving step, the encoded data is received by securing a buffer size determined by at least one of:

- (a) a receiving buffer size determined in advance;
- (b) a buffer size informed by call connection processing; and
- (c) a buffer size calculated based on a contents distributing rate and time-difference setting information, which is set in advance and/or informed by call connection.

41. (currently amended): A contents transmitting/receiving method, comprising the steps of:

- an output step of outputting data encoded by hierarchical encoding;
- a transmission step of transmitting by a plurality of transmitters at least a part of data of at least one layer among the data encoded by the hierarchical encoding;
- a receiving step of receiving encoded data transmitted by thea plurality of transmitterssessions;
- a step of discriminating and separating individual encoded data units from the received encoded data; and
- a reconstruction step of extracting encoded data received without a transmission error and a fault from the discriminated and separated encoded data, and reconstructing and outputting the extracted encoded data.

Claims 42-65 (canceled).

66. (currently amended): The contents distributing apparatus as claimed in claim 155, comprising an error correction code data transmitting device, wherein the error correction code data transmitting device transmits error correction code data generated from data of at least one layer among the encoded data.

67. (previously presented): The contents distributing apparatus as claimed in claim 66, wherein the transmitting device transmits encoded data and error correction code data individually by different sessions.

68. (previously presented): The contents distributing apparatus as claimed in claim 66, comprising a multiplexed transmitting device, wherein the multiplexed transmitting device multiplexes the encoded data and the error correction code data individually, and transmits the multiplexed data by a same session.

69. (previously presented): The contents distributing apparatus as claimed in claim 66, comprising the multiplexed transmitting device, wherein the multiplexed transmitting device multiplexes a part of encoded data and error correction code data, and transmits the multiplexed data and the data without multiplexing by respective sessions.

70. (previously presented): The contents distributing apparatus as claimed in claim 66, comprising a device for performing at least one of a routing priority control of per-session transmission lines and a power control of radio transmission lines by a session which transmits at least one of encoded data and error correction code data.

Claims 71-74 (canceled).

75. (currently amended): The contents receiving apparatus as claimed in claim 1271, wherein the reconstruction device restores, by an error correction code, data in which an error or a fault is generated, and reconstructs the data.

76. (currently amended): The contents receiving apparatus as claimed in claim 1271, wherein the reconstruction device restores multiplexed data in which an error or a fault is generated by an error correction code, and reconstructs the data.

77. (currently amended): The contents receiving apparatus as claimed in claim 1271, wherein the reconstruction device restores data without multiplexing and multiplexed data in which an error or a fault is generated by an error correction code and reconstructs the data.

78. (currently amended): The contents receiving apparatus as claimed in claim 1271, comprising a device for selecting whether or not to receive encoded data based on at least one of: error/loss rate of the received data; power that can be used in the receiving apparatus; and a setting determined in advance.

Claims 79-104 (canceled).

105. (new): The contents distributing apparatus as claimed in claim 1, wherein the plurality of transmitters transmit the encoded data in different sessions.

106. (new): The contents receiving apparatus as claimed in claim 12, wherein the encoded data is transmitted in different sessions by the plurality of transmitters.

107. (new): The contents transmitting/receiving system as claimed in claim 16, wherein the plurality of transmitters transmit the encoded data in different sessions.

108. (new): The contents distributing method as claimed in claim 17, wherein the encoded data is transmitted in different sessions by the plurality of transmitters.

109. (new): The contents receiving method as claimed in claim 36, wherein the encoded data is transmitted in different sessions by the plurality of transmitters

110. (new): The contents transmitting/receiving method as claimed in claim 41, wherein the encoded data is transmitted in different sessions by the plurality of transmitters.